

REMARKS

Claims 1-25 are pending in the present application, were examined, and stand rejected. In response, Claims 1-3, 5, 6, 8-10, 13, 16, 18, 20, 21 and 23 are amended, Claims 4 and 19 are cancelled and no claims are added. Applicants respectfully request reconsideration of pending Claims 1, 3, 5-18 and 20-25 in view of at least the following remarks. Reconsideration and withdrawal of the rejections of record are requested in view of such amendments and the following discussion.

I. Claims Rejected Under 35 U.S.C. §112

The Examiner has rejected Claims 1-25 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Regarding Claims 1, 10, 13, 16 and 23, Claims 1, 10, 13, 16 and 23 are amended to link “source location” and “destination location” to an instruction scheduled for execution. Applicants respectfully submit that such terms are known in the art to refer to, for example, source and destination operands of an instruction. Accordingly, Applicants respectfully submit that Claims 1, 10, 13, 16 and 23, as amended, now particularly point out and distinctly claim the subject matter, which Applicants regard as the invention.

Regarding Claim 5, Claim 5 is amended to include reference to a “scheduler” which reschedules an oldest instruction ready for re-execution by the execution unit. Likewise, Claim 10 is amended to recite executing an instruction having the source data storage location and a destination data storage location as operands. Accordingly, Applicants respectfully submit that rescheduling the instruction for execution coincides with of executing the instruction.

Regarding Claims 3 and 18, Claims 3 and 18 have been amended to refer to a scheduler to reschedule instructions for re-execution by the execution unit beginning with an oldest instruction ready for execution. Accordingly, based on Applicants’ amendments to Claims 1, 3, 5, 10, 13, 16, 18 and 23, Applicants respectfully submit that Claims 1-3, 5-18 and 20-25 now particularly point out and distinctly claim the subject matter, which Applicants regard as the invention. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the 35 U.S.C. §112, second paragraph, rejection of Claims 1-3, 5-18 and 20-25.

II. Claims Rejected Under 35 U.S.C. §102

The Examiner has rejected Claims 1, 2, 7-9, 16, 17 and 22 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,452,426 issued to Papworth et al. (“Papworth”). Applicants respectfully traverse this rejection.

“Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, *arranged as in the claim.*” Lindemann Maschinenfabrik v. American Hoist & Derrick (“Lindemann”), 730 F.2d 452, 1458 (Fed. Cir. 1994)(emphasis added). Additionally, each and every element of the claim must be exactly disclosed in the anticipatory reference. Titanium Metals Corp. of America v. Banner (“Banner Titanium”), 778 F.2d 775, 777 (Fed. Cir. 1985).

Regarding Claim 1, Claim 1 is amended to recite the following claim feature, which is neither taught nor suggested by Papworth or the references of record:

wherein the scheduler re-schedules execution of the instruction if the value of the validity bit of the destination data storage location indicates invalid data. (Emphasis added.)

Applicants respectfully submit that Papworth is devoid of any teachings regarding rescheduling and subsequent re-execution of instructions. Specifically, as indicated by Papworth:

If the source data valid flags indicate that one or both of the source data values for a reservation station table entry is invalid, the dispatch circuit 38 waits for the execution circuit 40 to execute previously dispatched physical micro-ops and generate the required source data values . . . The dispatch circuit 38 dispatches the pending physical micro-ops to the execution circuit 40 if both source data values are valid. (col. 14, lines 12-30.) (Emphasis added.)

Accordingly, based on the cited passage above and FIG. 8 of Papworth, it is clear that Papworth fails to teach or suggest the re-execution of instructions according to a value of a validity bit within a destination data storage location that is an operand of an instruction. In other words, based on the cited passages above, Applicants respectfully submit that the teachings of Papworth are strictly limited to delaying execution of instructions until source data values of the instruction are valid.

However, the case law is clear in establishing that anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention: Id. Accordingly, Applicants respectfully submit that the Examiner fails to establish a *prima facie* case of anticipation of Claim 1 since Papworth fails to teach or suggest each and every element recited by Claim 1, as amended.

Regarding Claims 2, 3 and 5-9, Claims 2, 3 and 5-9, based on their dependency from Claim 1, are also patentable over Papworth as well as the references of record. Consequently, Applicants respectfully request that the Examiner reconsider and withdraw the §102(b) rejection of Claims 2, 3 and 5-9.

Regarding Claim 16, Claim 16 is amended to recite the following claim features, which are neither taught nor suggested by either Papworth or the references of record:

wherein the scheduler re-schedules execution of the instruction of the value of the validity bit of the destination data storage location indicates invalid data. (Emphasis added.)

As indicated above with reference to Claim 1, the teachings of Papworth are strictly limited to delaying execution of an instruction until each source data value within each source operand of an instruction is valid. (See, col. 14, lines 27-30.) For at least the reasons described above with reference to Claim 1, Applicants respectfully submit that Applicants' amendment to Claim 16 prohibits the Examiner from establishing a *prima facie* case of anticipation, since Papworth, as well as the references of record, fail to teach or suggest each and every element recited by amended Claim 16. Accordingly, amended Claim 16 is patentable over Papworth, as well as the references of record. Consequently, Applicants respectfully request that the Examiner reconsider and withdraw the §102(b) rejection of Claim 16.

Regarding Claims 17, 18 and 20-22, Claims 17, 18 and 20-22 are also patentable over Papworth, as well as the references of record, based on their dependency from Claim 16. Consequently, Applicants respectfully request that the Examiner reconsider and withdraw the §102(b) rejection of Claims 17, 18 and 20-22.

CONCLUSION

In view of the foregoing, it is submitted that Claims 1-3, 5-18 and 20-25, as amended, patentably define the subject invention over the cited references of record, and are in condition for allowance and such action is earnestly solicited at the earliest possible date. If the Examiner believes a telephone conference would be useful in moving the case forward, he is encouraged to contact the undersigned at (310) 207-3800.

If necessary, the Commissioner is hereby authorized in this, concurrent and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly, extension of time fees.

Respectfully submitted,

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CERTIFICATE OF MAILING:

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on November 8, 2004.

Marilyn Bass

November 8, 2004